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EXAMINER

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**BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES**

Application Number: 09/740,846
Filing Date: December 21, 2000
Appellant(s): KIM, JI WOONG

Daniel Y. J. Kim (36,186)
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed July 25, 2006, appealing from the Office
action mailed November 18, 2005.

(1) Real Party in Interest

A statement identifying by name the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The statement of the status of claims contained in the brief is correct.

(4) Status of Amendments After Final

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

(5) Summary of Claimed Subject Matter

The summary of claimed subject matter contained in the brief is correct.

(6) Grounds of Rejection to be Reviewed on Appeal

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

(7) Claims Appendix

The copy of the appealed claims contained in the Appendix to the brief is correct.

(8) Evidence Relied Upon

EP 0 965 795 A2	EMMOTT	12-1999
5653906	FOWLER	8-1997
5732212	PERHOLTZ	3-1998

Thurm, Scott "Whirlpool to Launch Internet-Ready Refrigerator" The Wall Street Journal (Eastern Edition) (Jan 7, 2000), pg. 1

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claims 8-16, 22, 24-27, 29, are rejected under 35 U.S.C. 103(a) as being unpatentable over Fowler in view of Thurm.

In considering claims 8 and 22, Fowler discloses a microwave oven comprising: a microcomputer, (col. 7, lines 63-65); obtaining cooking information over a network, (col. 10, lines 62-67, col. 11, lines 1-25); a converter which automatically converts the cooking information into a form recognizable by the microcomputer, the microcomputer generating a control signal to cook food based on the converted cooking information in response to a user signal, (col. 27, lines 10-17).

Although the disclosed apparatus of Fowler, shows substantial features of the claimed invention, it fails to expressly disclose: an Internet search for cooking information in response to a first user signal, the first user selecting one of displayed results of the Internet search to automatically cook food.

Nevertheless, in a similar field of endeavor Thurm discloses: an Internet search for cooking information in response to a first user signal, the first user selecting a displayed result of the Internet search to automatically cook food, (see page 1).

Thus, given the teachings of Thurm, it would have been obvious to a person of ordinary skill in the art, at the time of the present invention, to modify the teachings of Fowler to show downloading cooking information from the Internet in response to a first user signal, and selecting one of displayed results from the downloaded information to automatically cook food. This would have provided a simple, efficient, user-friendly means for accessing appropriate cooking information over the Internet by the touch of a button, and then having a microwave automatically cook food by selecting one of the displayed results from the downloaded information (Thurm, page 1).

In considering claim 9, Fowler teaches the cooking information configuring at least one cooking parameter of the oven, and wherein the food is cooked in accordance with the at least one parameter in response to the user signal. See col. 27, lines 10-17.

In considering claim 10, Fowler further teaches a display for displaying the cooking information. See col. 6, lines 47-67, col. 7, lines 1-5.

In considering claim 11, Fowler teaches a user signal selecting the cooking information on the display. See col. 26, lines 53-61.

In considering claim 12, Fowler teaches a user signal generated from activation of a cooking start button. See col. 25, lines 32-51.

In considering claim 13, Thurm teaches a search engine for obtaining the cooking information from an Internet site. See page 1. One of ordinary skill in the art would combine the teachings of Fowler with Thurm for the reasons indicated in consideration of claim 8.

In considering claim 14, it is implicit in the teachings of Fowler that the microcomputer receives the converted signal containing cooking information from the converter based on a data transmission available signal. See col. 7, lines 65-67, col. 8, lines 1-6.

In considering claim 15, it is implicit in the teachings of Fowler that the data transmission available signal indicates that the converter is in a state for sending data to the microcomputer. See col. 8, lines 24-28.

In considering claim 16, it is implicit in the teachings of Fowler that the data transmission available signal assumes a first level when the converter is in a state for sending data to the microcomputer and assumes a second level when the microcomputer is in a state for receiving data from the converter. See col. 27, lines 25-43.

In considering claim 24, Fowler teaches the user signal generated when the user presses a cook start button. See col. 25, lines 32-51.

In considering claim 25, Fowler teaches the microcomputer controlling the oven to cook food based on a set of control signals. See col. 25, lines 45-51.

In considering claim 26, Fowler teaches a first control signal allowing the microcomputer to sense an operational state of a signal converting unit. See col. 25, lines 45-51 .

In considering claim 27, Fowler further teaches the microcomputer recognizing a data transmission zone of the signal converting unit when the first control signal assumes a first level, and recognizes a data transmission zone of the microcomputer when the first control signal assumes a second level. See col. 18, lines 65-67, col. 19, lines 1-12.

In considering claim 29, although it is not expressly stated, it is implicit in the teachings of Fowler that a third control signal is a data read control signal which is input into the microcomputer when the first control signal assumes the first level. See col. 27, lines 25-43.

Claims 17-21, 28, 30-32, are rejected under 35 U.S.C. 103(a) as being unpatentable over Fowler in view of Thurm, and further in view of Perholtz et al. (hereinafter Perholtz), U.S. patent 5,732,212.

In considering claim 17, although the disclosed apparatus of Fowler, shows substantial features of the claimed invention, it fails to expressly disclose: a global interrupt signal.

Nevertheless, global interrupt signals were well known in the art at the time of the present invention. This is shown in a similar field of endeavor where Perholtz teaches a system and method for remotely controlling a data processing device comprising: Inputting an interrupt signal into a microcomputer when scan codes become available for translation, (col. 38, lines 66-67, col. 39, lines 1-5).

Thus, given the teachings of Perholtz, it would have been obvious to a person of ordinary skill in the art, at the time of the present invention, to modify the teachings of Fowler in order to show a global interrupt signal being input into the microcomputer when a data transmission available signal assumes a first level. This would have invoked a routine to cook food in the microwave oven after the cooking information

obtained from the Internet site was converted into form recognizable by the microcomputer and ready to be transmitted to the microcomputer, Perholtz, col. 39, lines 5-8.

In considering claim 18, it is implicit in the teachings of Fowler that a data read control signal is input into the microcomputer when the data transmission available signal assumes a first level. See col. 27, lines 25-43.

In considering claim 19, the teachings of Fowler provide a means for the data read control signal to be a 1-byte interrupt signal. See col. 27, lines 38-43.

In considering claim 20, Fowler teaches the microcomputer receiving the converted signal containing the cooking information in synchronism with a data receive property signal, and the microcomputer recognizing that it is in a ready state to receive data when the data receive property signal assumes a first value and recognizes that it is in a state where data reading has been completed with the data receive property signal assuming a second value. See col. 27, lines 25-43. 24.

In considering claim 21, the teachings of Fowler provide a means for the data transmission available signal, the global interrupt signal, the data read control signal, and the data receive property signal to be received through different ports of the microcomputer. See col. 27, lines 25-43. 25.

In considering claim 28, although the disclosed apparatus of Fowler, shows substantial features of the claimed invention, it fails to expressly disclose: a global interrupt signal.

Nevertheless, global interrupt signals were well known in the art at the time of the present invention. This is shown in a similar field of endeavor where Perholtz teaches a system and method for remotely controlling a data processing device comprising: inputting an interrupt signal into a microcomputer when scan codes become available for translation, (col. 38, lines 66-67, col. 39, lines 1-5).

Thus, given the teachings of Perholtz, it would have been obvious to a person of ordinary skill in the art, at the time of the present invention, to modify the teachings of Fowler in order to show a second control signal being a global interrupt signal which is input into the microcomputer when the first control signal assumes the first level. This would have invoked a routine to cook food in the microwave oven after the cooking information obtained from the Internet site was converted into form recognizable by the microcomputer and the first control signal assumed its first level, Perholtz, col. 39, lines 5-8. 26.

In considering claim 30, the teachings of Fowler provide a means for the data read control signal to be a 1-byte interrupt signal. See col. 27, lines 38-43.

In considering claim 31, Fowler teaches the microcomputer recognizing that it is in a ready state to receive data when a fourth control signal assumes a first value and recognizes that it is in a state where data reading has been completed when the fourth control signal assumes a second value. See col. 27, lines 25-43. 28.

In considering claim 32, the teachings of Fowler provide a means for the first, second, third, and fourth control signals to be received through different ports of the microcomputer. See col. 27, lines 25-43.

Claims 33-38, are rejected under 35 U.S.C. 103(a) as being unpatentable over Emmott et al. (hereinafter Emmott), EP Patent 0 965 795 in view of Thurm.

In considering claim 33, Emmott discloses an Internet microwave oven comprising: an access unit connected to a communication line, for accessing the Internet, (col. 4, lines 9-12); a search engine to perform a search for cooking information when the Internet is accessed through the access unit, (col. 3, lines 17-27); a microcomputer, (col. 5, lines 23-39); a display unit for displaying results of the Internet search, (col. 3, lines 42-48).

Although the disclosed apparatus of Emmott, shows substantial features of the claimed invention, it fails to explicitly disclose: automatically outputting a control signal to cook food depending on information selected by the user.

Nevertheless, in a similar field of endeavor, Thurm both suggests and teaches: a signal converting unit for receiving downloaded cooking information associated with one of the displayed results and for automatically converting the downloaded cooking information into a signal capable of being recognized by the microcomputer when said one of the displayed results is selected by a user, said signal corresponding to the converted cooking information controlling the microcomputer to automatically set the oven to perform a cooking operation in response to a user signal, (see page 1).

Thus, given the teachings of Thurm, it would have been obvious to a person of ordinary skill in the art, at the time of the present invention, to modify the teachings of Emmott to show automatically outputting a control signal to cook food depending on information selected by the user. This would have provided a simple, efficient, user-friendly means for performing cooking operations by downloading cooking information, displaying the cooking information, and using the downloaded information selected by a user from the display to cook food automatically, (Thurm, page 1).

In considering claim 34, Emmott teaches a modem for an access unit. See col. 4, lines 9-12.

In considering claim 35, it is implicit in the teachings of Emmott that the search engine is an Internet browser. See Emmott, col. 5, lines 23-39.

In considering claim 36, Emmott teaches a liquid crystal display (LCD) for a display unit. See col. 4, lines 51-57.

In considering claim 38, although the disclosed teachings of Emmott show substantial features of the claimed invention, they fail to expressly disclose: communication between a search engine and a signal converter in accordance with RS-232C standards.

Nevertheless, it would have been apparent to one of ordinary skill in the art to use an RS-232C interface because it is a standard used for communication between computers, terminals, and modems.

Thus, it would have been obvious to a person of ordinary skill in the art, at the time of the present invention, to modify the teachings of Emmott, in order to communicate between the search engine and a signal converter by means of RS-232C standards. This would have provided a well-known method of communication for Internet browsing when using the Internet microwave oven disclosed by Emmott, col. 5, lines 23-39. The claimed invention (claim 38) therefore, would have been an obvious modification of the teachings disclosed by Emmott.

Claim 37, is rejected under 35 U.S.C. 103(a) as being unpatentable over Emmott in view of Thurm, and further in view of Fowler.

In considering claim 37, although the teachings of Emmott show substantial features of the claimed invention, they fail to expressly disclose: a microcomputer recognizing a data transmission zone of the signal converting unit if a high signal generated by the signal converting unit is applied to the microcomputer, while the microcomputer recognizes a data transmission zone of the microcomputer if a low signal is applied to the microcomputer.

Nevertheless, Fowler teaches a microcomputer recognizing a data transmission zone of the signal converting unit if a high signal generated by the signal converting unit is applied to the microcomputer, while the microcomputer recognizes a data transmission zone of the microcomputer if a low signal is applied to the microcomputer, (col. 18, lines 65-67, col. 19, lines 1-12).

Thus, if not implicit in the teachings of Emmott, it would have been obvious to one of ordinary skill in the art to combine the teachings of Emmott with Fowler to show a microcomputer recognizing a data transmission zone of the signal converting unit if a high signal generated by the signal converting unit is applied to the microcomputer, while the microcomputer recognizes a data transmission zone of the microcomputer if a low signal is applied to the microcomputer. This also would have provided a simple, efficient, user-friendly means for performing cooking operations by downloading cooking information and using the downloaded information to cook food, Fowler, col. 11, lines 3-25.

(10) Response to Argument

With regards to claims 33-38, more specifically with regards to claim 33, Appellant's argue in section I, pages 9-12, that: the Emmott oven does not include a signal converting unit which automatically converts cooking information downloaded from an Internet search into a signal capable of being recognized by a microcomputer when one of the displayed results from the search is selected by a user; Emmott also does not use such a converted signal to control an internal microcomputer to automatically set the oven to perform a cooking operation in response to a user signal; the Thurm publication does not make up for the deficiencies of Emmott because the Thurm system requires an external appliance; and the Thurm publication does not teach or suggest that its oven includes a microcomputer and a signal converting unit, the latter of which performs the functions of "automatically converting the downloaded cooking information into a signal capable of being recognized by the microcomputer when said one of the displayed results is selected by a user", and that the converted signal is then used to "control the microcomputer to automatically set the oven to perform a cooking operation in response to a user signal."

In response to appellant's remarks with regards to claim 33, as indicated in the previous action, examiner has acknowledged the teachings of Emmott fail to expressly disclose the oven including a signal converting unit which automatically converts cooking information downloaded from an Internet search into a signal capable of being recognized by a microcomputer when one of the displayed results from the search is selected by a user. In the action, examiner also acknowledges the teachings of Emmott

do not expressly disclose using such a converted signal to control an internal microcomputer to automatically set the oven to perform a cooking operation in response to a user signal. Nevertheless, examiner maintains such teachings are an obvious modification of the teachings of Emmott when combined with the teachings of Thurm.

As indicated in previous actions, Thurm both suggests and discloses: a signal converting unit for receiving downloaded cooking information associated with one of displayed results and for automatically converting the downloaded cooking information into a signal capable of being recognized by a microcomputer when said one of the displayed results is selected by a user, said signal corresponding to the converted cooking information controlling the microcomputer to automatically set an oven to perform a cooking operation in response to a user signal, (see fourth paragraph under the Full Text section). In the cited passage, although the teachings of Thurm require an external appliance (i.e. the refrigerator), examiner maintains that it would have been obvious to one of ordinary skill in the art to utilize the functionality of the refrigerator in the oven, since moving the functionality of the refrigerator to the oven is not non-obvious, and would have allowed a person utilizing the teachings of Emmott (col. 5, lines 23-39) to use the downloaded information selected by a user from the display to cook food automatically, (Thurm, see fourth paragraph under the Full Text section). Furthermore, although the Thurm publication does not expressly disclose that its oven includes a microcomputer and a signal converting unit, the latter of which performs the functions of "automatically converting the downloaded cooking information into a signal capable of being recognized by the microcomputer when said one of the displayed

results is selected by a user", and that the converted signal is then used to "control the microcomputer to automatically set the oven to perform a cooking operation in response to a user signal", it is implied that either the oven or the refrigerator includes such a microcomputer and a signal converting unit, the latter of which performs the functions of "automatically converting the downloaded cooking information into a signal capable of being recognized by the microcomputer when said one of the displayed results is selected by a user", and that the converted signal is then used to "control the microcomputer to automatically set the oven to perform a cooking operation in response to a user signal" (see fourth paragraph under the Full Text section), and as previously mentioned even if such functionality is in the refrigerator, it would have been obvious to one of ordinary skill in the art to utilize the functionality of the refrigerator in the oven since moving the functionality of the refrigerator to the oven is not non-obvious, and would have allowed a person utilizing the teachings of Emmott (col. 5, lines 23-39) to use the downloaded information selected by a user from the display to cook food automatically, (Thurm, see fourth paragraph under the Full Text section). Still further, although Thurm discloses utilizing a refrigerator with an oven, applicant's claimed invention provides no unexpected result when compared to the teachings of Thurm (i.e. in both instances the oven is automatically set to perform a cooking operation in response to downloaded cooking information). Thus, examiner maintains applicant's claimed teachings would have been obvious to one of ordinary skill in the art.

With regards to claims 33-38, more specifically with regards to claim 37, Appellant's argue in section I, page 13, that: Emmott and Thurm do not expressly disclose that the microcomputer in the oven "recognizes a data transmission zone of the signal converting unit if a high signal generated by the signal converting unit is applied to the microcomputer, while the microcomputer recognizes a data transmission zone of the microcomputer if a low signal is applied to the microcomputer."

In response to appellant's remarks with regards to claim 37, examiner submits it was acknowledged in the previous action by the examiner that Emmott and Thurm do not expressly disclose that "the microcomputer in the oven recognizes a data transmission zone of the signal converting unit if a high signal generated by the signal converting unit is applied to the microcomputer, while the microcomputer recognizes a data transmission zone of the microcomputer if a low signal is applied to the microcomputer." Nevertheless, examiner maintains such teachings were well known in the art, as disclosed by Fowler (col. 18, line 65-col. 19, line 12). Examiner is confused as to why appellants believe no explanation of how an Emmott-Thurm combination supplies the features recited in claim 37 when examiner has clearly provided reasons for combining the teachings of Fowler with Emmott and Thurm in the previous action. As per the previous action, examiner thus maintains if not implicit in the teachings of Emmott and Thurm, the rejection of claim 37 in view of the combined teachings of Emmott, Thurm and Fowler, as indicated in the previous action, reads on appellant's claimed invention, and is proper.

With regards to claims 8-16, 22, 24-27, and 29, more specifically with regards to claim 8, Appellant's argue in section II, pages 14 and 15, that: the Fowler patent does not teach or suggest performing any function based on the results of an Internet search; and, the Thurm publication does not teach or suggest that its oven includes 1) "a converter which automatically converts one of a plurality of displayed results of an Internet search containing cooking information into a signal recognizable by the microcomputer in response to a first user signal," 2) that "the first user signal selects said one of said plurality of displayed results of the Internet search," and 3) that "the converted signal controls the microcomputer to automatically generate a control signal to set the oven to cook food based on the cooking information in response to a second user signal."

In response to appellant's remarks with regards to claim 8, as indicated in the previous action, examiner has acknowledged the teachings of Fowler fail to expressly disclose any function based on the results of the Internet search. Nevertheless, as indicated in the previous action, Fowler does disclose obtaining cooking information over a network, (col. 10, line 62- col. 11, line 25); and, a converter which automatically converts the cooking information into a form recognizable by a microcomputer, the microcomputer generating a control signal to cook food based on the converted cooking information in response to a user signal, (col. 27, lines 10-17). Further, examiner maintains modifying the teachings of Fowler with the teachings of Thurm to disclose a function based on the results of an Internet search would have been obvious to a person of ordinary skill in the art.

As indicated in previous actions, Thurm discloses: an Internet search for cooking information in response to a first user signal, the first user selecting a displayed result of the Internet search to automatically cook food, (see fourth paragraph under the Full Text section). Examiner maintains one of ordinary skill in the art would modify the teachings of Fowler (col. 11, lines 3-25) with Thurm (see fourth paragraph under the Full Text section), to access appropriate cooking information over an Internet by the touch of a button, and then having a microwave automatically cook food by selecting one of the displayed results from the downloaded information.

Furthermore, examiner acknowledges the Thurm publication does not expressly disclose that its oven includes 1) "a converter which automatically converts one of a plurality of displayed results of an Internet search containing cooking information into a signal recognizable by the microcomputer in response to a first user signal," 2) that "the first user signal selects said one of said plurality of displayed results of the Internet search," and 3) that "the converted signal controls the microcomputer to automatically generate a control signal to set the oven to cook food based on the cooking information in response to a second user signal."

Nevertheless, with regards to 1 and 2), It is implied that either the oven or the refrigerator includes such "a converter which automatically converts a displayed result of an Internet search containing cooking information into a signal recognizable by the microcomputer in response to a first user signal in the teachings of Thurm (see fourth paragraph under the Full Text section), and as previously mentioned even if such functionality is in the refrigerator, it would have been obvious to one of ordinary skill in

the art to utilize the functionality of the refrigerator in the oven, since moving the functionality of the refrigerator to the oven is not non-obvious. Further, examiner maintains one of ordinary skill in the art would have found it advantageous to modify the teachings of Fowler with Thurm to disclose a plurality of displayed results (i.e. the menus disclosed by Fowler, see col. 11, lines 3-25), the user selecting one of said plurality of displayed results of the Internet search to, as mentioned previously, access appropriate cooking information over an Internet by the touch of a button, and then having a microwave automatically cook food by selecting one of the displayed results from the downloaded information, (See Fowler, col. 11, lines 3-25, and Thurm fourth paragraph under the Full Text section). Thus, and further, with regards to 3), since Fowler discloses generating a control signal to cook food based on the converted cooking information in response to a user signal, (col. 27, lines 10-17), it would be apparent to one of ordinary skill to combine the teachings of Fowler and Thurm to disclose the converted signal controlling the microcomputer to automatically generate a control signal to set the oven to cook food based on the cooking information in response to a second user signal. As previously mentioned this would have facilitated a means for a user of the microwave oven to access appropriate cooking information over the Internet by the touch of a button, and then have the microwave automatically cook food by selecting one of the displayed results from the downloaded information (See Fowler, col. 11, lines 3-25, and Thurm fourth paragraph under the Full Text section).

With regards to claims 8-16, 22, 24-27, and 29, more specifically with regards to claim 13, Appellant's argue in section II, pages 15 and 16, that: the Fowler patent and Thurm publication do not individually or collectively teach or suggest a signal converter being coupled between a microcomputer and search engine within the oven; and the Internet search engine is located in a refrigerator, not in a microwave oven as required by claim 13.

In response to appellant's remarks with regards to claim 13, as previously indicated, Fowler discloses a converter which automatically converts the cooking information into a form recognizable by a microcomputer, the microcomputer generating a control signal to cook food based on the converted cooking information in response to a user signal, (col. 27, lines 10-17). And as acknowledged by applicant, Thurm discloses an Internet search engine for the microwave (see fourth paragraph under the Full Text section). Examiner maintains one of ordinary skill in the art would have found it advantageous to modify the teachings of Fowler with Thurm for the purpose of accessing appropriate cooking information over the Internet by the touch of a button, and then have the microwave automatically cook food by selecting one of the displayed results from the downloaded information (See Fowler, col. 11, lines 3-25, and Thurm fourth paragraph under the Full Text section). Furthermore, examiner maintains that although the location of signal converter is not expressly disclosed in the teachings of Fowler, appellant's claims reciting "the signal converter is coupled between the microcomputer and the search engine" provide no unexpected results when compared to the teachings of Fowler, and are thus obvious modifications to the teachings of

Fowler to one of ordinary skill in the art. Likewise, although Thurm suggests the Internet engine is located in the refrigerator, examiner maintains that it would have been obvious to one of ordinary skill in the art to utilize the functionality of the refrigerator in the oven, since moving the functionality of the refrigerator to the oven is not non-obvious. Still further, although Thurm discloses utilizing a refrigerator with an oven, applicant's claimed invention provides no unexpected result when compared to the teachings of Thurm (i.e. in both instances a search engine is used for obtaining cooking information from an Internet site). Thus, examiner maintains applicant's claimed teachings would have been obvious to one of ordinary skill in the art.

With regards to claims 8-16, 22, 24-27, and 29, more specifically with regards to claim 14, Appellant's argue in section II, pages 16 and 17, that: the Fowler patent and Thurm publication do not teach or suggest features of claim 14 that relate to the "converted signal"; the Fowler oven is not connected to the Internet and therefore does not perform functions based on cooking information derived from an Internet search; and, the cited portion of Fowler does not suggest an Internet microwave oven microcomputer which "receives the converted signal containing the cooking information from the converter based on a data transmission available signal".

In response to appellant's remarks with regards to claim 14, as previously indicated, Fowler discloses a converter which automatically converts the cooking information into a form recognizable by a microcomputer, the microcomputer generating a control signal to cook food based on the converted cooking information in response to

a user signal, (col. 27, lines 10-17). And as acknowledged by applicant, Thurm discloses an Internet search engine for the microwave (see fourth paragraph under the Full Text section). Examiner maintains one of ordinary skill in the art would have found it advantageous to modify the teachings of Fowler with Thurm for the purpose of accessing appropriate cooking information over the Internet by the touch of a button, and then have the microwave automatically cook food by selecting one of the displayed results from the downloaded information (See Fowler, col. 11, lines 3-25, and Thurm fourth paragraph under the Full Text section). Furthermore, the cited portion of Fowler (col. 7, line 65-col. 8, line 6) discloses a microcomputer that receives orders at the microwave oven over a network, (also see col. 10, line 62-col. 11, line 25). Examiner maintains that one of ordinary skill in the art would have found it obvious to utilize a data transmission available signal so that the microwave oven taught by Fowler would be able to automatically cook food based on the converted cooking information in response to the user signal.

With regards to claims 8-16, 22, 24-27, and 29, more specifically with regards to claim 15, Appellant's argue in section II, page 17, that: the Fowler patent and Thurm publication do not teach or suggest a data transmission available signal that indicates the state of such a converter for sending data to a microcomputer.

In response to appellant's remarks with regards to claim 15, as previously indicated, Fowler discloses a converter which automatically converts the cooking information into a form recognizable by a microcomputer, the microcomputer generating

a control signal to cook food based on the converted cooking information in response to a user signal, (col. 27, lines 10-17). And as acknowledged by applicant, Thurm discloses an Internet search engine for the microwave (see fourth paragraph under the Full Text section). Examiner maintains one of ordinary skill in the art would have found it advantageous to modify the teachings of Fowler with Thurm for the purpose of accessing appropriate cooking information over the Internet by the touch of a button, and then have the microwave automatically cook food by selecting one of the displayed results from the downloaded information (See Fowler, col. 11, lines 3-25, and Thurm fourth paragraph under the Full Text section). Furthermore, the cited portion of Fowler (col. 8, lines 24-28) discloses a state for receiving data at the microwave oven over a network, (also see col. 10, line 62-col. 11, line 25). As previously mentioned, examiner maintains that one of ordinary skill in the art would have found it obvious to utilize a data transmission available signal so that the microwave oven taught by Fowler would be able to automatically cook food based on the converted cooking information in response to the user signal.

With regards to claims 8-16, 22, 24-27, and 29, more specifically with regards to claim 16, Appellant's argue in section II, page 18, that: the Fowler patent and Thurm publication do not teach or suggest the data transmission available signal, let alone one having different signal levels corresponding to the sending and receiving of data as specified in claim 16.

In response to appellant's remarks with regards to claim 16, as previously indicated, Fowler discloses a converter which automatically converts the cooking information into a form recognizable by a microcomputer, the microcomputer generating a control signal to cook food based on the converted cooking information in response to a user signal, (col. 27, lines 10-17). And as acknowledged by applicant, Thurm discloses an Internet search engine for the microwave (see fourth paragraph under the Full Text section). Examiner maintains one of ordinary skill in the art would have found it advantageous to modify the teachings of Fowler with Thurm for the purpose of accessing appropriate cooking information over the Internet by the touch of a button, and then have the microwave automatically cook food by selecting one of the displayed results from the downloaded information (See Fowler, col. 11, lines 3-25, and Thurm fourth paragraph under the Full Text section). Furthermore, examiner maintains it is the teachings of Fowler (col. 27, lines 25-43), provide a means for the data transmission available signal to have different signal levels corresponding to the sending and receiving of data as specified in claim 16 since Fowler discloses both sending and receiving data.

With regards to claims 8-16, 22, 24-27, and 29, more specifically with regards to claim 22, Appellant's argue in section II, pages 18 and 19, that: the Fowler patent does not teach or suggest performing any function based on the results of an Internet search; and, the Thurm publication does not teach or suggest that its oven includes 1) "a converter which automatically converts one of a plurality of displayed results of an

Internet search containing cooking information into a signal recognizable by the microcomputer in response to a first user signal," 2) that "the first user signal selects said one of said plurality of displayed results of the Internet search," and 3) that "the converted signal controls the microcomputer to automatically generate a control signal to set the oven to cook food based on the cooking information in response to a second user signal."

In response to appellant's remarks with regards to claim 22, as indicated in the previous action, examiner has acknowledged the teachings of Fowler fail to expressly disclose any function based on the results of the Internet search. Nevertheless, as indicated in the previous action, Fowler does disclose obtaining cooking information over a network, (col. 10, line 62- col. 11, line 25); and, a converter which automatically converts the cooking information into a form recognizable by a microcomputer, the microcomputer generating a control signal to cook food based on the converted cooking information in response to a user signal, (col. 27, lines 10-17). Further, examiner maintains modifying the teachings of Fowler with the teachings of Thurm to disclose a function based on the results of an Internet search would have been obvious to a person of ordinary skill in the art.

As indicated in previous actions, Thurm discloses: an Internet search for cooking information in response to a first user signal, the first user selecting a displayed result of the Internet search to automatically cook food, (see fourth paragraph under the Full Text section). Examiner maintains one of ordinary skill in the art would modify the teachings of Fowler (col. 11, lines 3-25) with Thurm (see fourth paragraph under the Full Text

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section), to access appropriate cooking information over an Internet by the touch of a button, and then having a microwave automatically cook food by selecting one of the displayed results from the downloaded information.

Furthermore, examiner acknowledges the Thurm publication does not expressly disclose that its oven includes 1) "a converter which automatically converts one of a plurality of displayed results of an Internet search containing cooking information into a signal recognizable by the microcomputer in response to a first user signal," 2) that "the first user signal selects said one of said plurality of displayed results of the Internet search," and 3) that "the converted signal controls the microcomputer to automatically generate a control signal to set the oven to cook food based on the cooking information in response to a second user signal."

Nevertheless, with regards to 1 and 2), It is implied that either the oven or the refrigerator includes such "a converter which automatically converts a displayed result of an Internet search containing cooking information into a signal recognizable by the microcomputer in response to a first user signal in the teachings of Thurm (see fourth paragraph under the Full Text section), and as previously mentioned even if such functionality is in the refrigerator, it would have been obvious to one of ordinary skill in the art to utilize the functionality of the refrigerator in the oven, since moving the functionality of the refrigerator to the oven is not non-obvious. Further, examiner maintains one of ordinary skill in the art would have found it advantageous to modify the teachings of Fowler with Thurm to disclose a plurality of displayed results (i.e. the menus disclosed by Fowler, see col. 11, lines 3-25), the user selecting one of said

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plurality of displayed results of the Internet search to, as mentioned previously, access appropriate cooking information over an Internet by the touch of a button, and then having a microwave automatically cook food by selecting one of the displayed results from the downloaded information, (See Fowler, col. 11, lines 3-25, and Thurm fourth paragraph under the Full Text section). Thus, and further, with regards to 3), since Fowler discloses generating a control signal to cook food based on the converted cooking information in response to a user signal, (col. 27, lines 10-17), it would be apparent to one of ordinary skill to combine the teachings of Fowler and Thurm to disclose the converted signal controlling the microcomputer to automatically generate a control signal to set the oven to cook food based on the cooking information in response to a second user signal. As previously mentioned this would have facilitated a means for a user of the microwave oven to access appropriate cooking information over the Internet by the touch of a button, and then have the microwave automatically cook food by selecting one of the displayed results from the downloaded information (See Fowler, col. 11, lines 3-25, and Thurm fourth paragraph under the Full Text section).

With regards to claims 8-16, 22, 24-27, and 29, more specifically with regards to claim 26, Appellant's argue in section II, pages 19 and 20, that: the Fowler patent and Thurm publication fail to individually or collectively teach or suggest the signal converting unit of the claimed invention including its placement inside of the oven.

In response to appellant's remarks with regards to claim 26, as previously indicated, Fowler discloses a converter which automatically converts the cooking

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information into a form recognizable by a microcomputer, the microcomputer generating a control signal to cook food based on the converted cooking information in response to a user signal, (col. 27, lines 10-17). Furthermore, examiner maintains that although the location of signal converter is not expressly disclosed in the teachings of Fowler, such teachings provide no unexpected result and are thus obvious modifications to one of ordinary skill in the art.

With regards to claims 8-16, 22, 24-27, and 29, more specifically with regards to claim 27, Appellant's argue in section II, page 20, that: the Fowler patent and Thurm publication do not teach or suggest "the microcomputer recognizes a data transmission zone of the signal converting unit when the first control signal assumes a first level and recognizes a data transmission zone o the microcomputer when the data transmission zone assumes a second level".

In response to appellant's remarks with regards to claim 27, examiner maintains Fowler does teach the microcomputer recognizes a data transmission zone of the signal converting unit when the first control signal assumes a first level and recognizes a data transmission zone o the microcomputer when the data transmission zone assumes a second level in the cited passage (col. 18, line 65-col. 19, line 12), since Fowler discloses the microcomputer recognizing two voltages (i.e. data transmission zones) in providing a constant cooking power for the microwave.

With regards to claims 8-16, 22, 24-27, and 29, more specifically with regards to claim 29, Appellant's argue in section II, page 21, that: the Fowler patent and Thurm publication whether taken alone or in combination do not teach or suggest "a third control signal is data read control signal which is input into the microcomputer when the first control signal assumes said first level".

In response to appellant's remarks with regards to claim 29, examiner maintains Fowler implies a third control signal is data read control signal which is input into the microcomputer when the first control signal assumes said first level, (col. 27, lines 25-43), since Fowler discloses multiple data read signals input into the microcomputer.

With regards to claims 7-21, 28, and 30-32, more specifically with regards to claim 17, Appellant's argue in section III, pages 21 and 22, that: Perholtz does not teach or suggest features as specifically applied to an oven as defined in claim 8; and although global signals were well known at the time of the claimed invention, Perholtz does not teach or suggest that "a global interrupt signal is input into the microcomputer when the data transmission available signal assumes said first level".

In response to appellant's remarks with regards to claim 17, examiner maintains the teachings of Fowler modified by the teachings of Thurm teach the specific types of signals as recited in claim 8 for reasons previously mentioned. Further, examiner maintains further modifying the teachings of Fowler with well known teachings as disclosed by Perholtz would have been obvious to one of ordinary skill in the art in order to invoke a routine to cook food in the microwave oven after the cooking information

obtained from the Internet site was converted into a form recognizable by the microcomputer and ready to be transmitted to the microcomputer, (Perholtz, col. 39, lines 5-8).

With regards to claims 7-21, 28, and 30-32, more specifically with regards to claim 18, Appellant's argue in section III, page 22, that: Fowler, Thurm, and Perholtz do not teach or suggest "a data read control signal is input into the microcomputer when the data transmission available signal assumes said first level".

In response to appellant's remarks with regards to claim 18, examiner maintains it is implicit in the teachings of Fowler that a data read control signal is input into the microcomputer when the data transmission available signal assumes a first level, (Fowler, col. 27, lines 25-43). Since Fowler discloses the utilization of logic levels.

With regards to claims 7-21, 28, and 30-32, more specifically with regards to claim 19, Appellant's argue in section III, page 22, that: Fowler, Thurm, and Perholtz do not teach or suggest "the data read control signal is a 1-byte interrupt signal".

In response to appellant's remarks with regards to claim 19, examiner maintains the teachings of Fowler provide a means for the data read control signal to be a 1-byte interrupt signal, (Fowler, col. 27, lines 38-43) since Fowler discloses the data signals comprising byte lengths.

With regards to claims 7-21, 28, and 30-32, more specifically with regards to claim 20, Appellant's argue in section III, pages 22 and 23, that: Fowler, Thurm, and Perholtz do not teach or suggest "the microcomputer receives the converted signal containing the cooking information in synchronism with a data receive property signal, and wherein the microcomputer recognizes that it is in a read state to receive data when the data receive property signal assumes a first value and recognizes that it is in a state where data reading has been completed with the data receive property signal assumes a second value".

In response to appellant's remarks with regards to claim 20, examiner maintains Fowler teaches the microcomputer receives the converted signal containing the cooking information in synchronism with a data receive property signal, and wherein the microcomputer recognizes that it is in a read state to receive data when the data receive property signal assumes a first value and recognizes that it is in a state where data reading has been completed with the data receive property signal assumes a second value, (Fowler, col. 27, lines 38-43) since Fowler discloses receiving data at the microcomputer until all data has been transmitted.

With regards to claims 7-21, 28, and 30-32, more specifically with regards to claim 21, Appellant's argue in section III, page 23, that: Fowler, Thurm, and Perholtz do not teach or suggest "the data transmission available signal, the global interrupt signal, the data read control signal, and the data receive property signal are received through different ports of the microcomputer".

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In response to appellant's remarks with regards to claim 21, examiner maintains the teachings of Fowler provide a means for the data transmission available signal, the global interrupt signal, the data read control signal, and the data receive property signal are received through different ports of the microcomputer, (Fowler, col. 27, lines 25-43) since Fowler discloses receiving and transmitting data from the microcomputer.

Furthermore, examiner maintains that although ports for the data transmission available signal, the global interrupt signal, the data read control signal, and the data receive property signal are not expressly disclosed in the teachings of Fowler, such teachings provide no unexpected result when compared to the teachings of Fowler, and are thus obvious modifications to one of ordinary skill in the art.

With regards to claims 7-21, 28, and 30-32, more specifically with regards to claim 28, Appellant's argue in section III, page 23, that: Perholtz does not teach or suggest features of claim 22 missing from the Fowler patent and Thurm publication.

In response to appellant's remarks with regards to claim 28, examiner maintains the teachings of Fowler modified by the teachings of Thurm teaches the features recited in claim 22 for reasons previously mentioned.

With regards to claims 7-21, 28, and 30-32, more specifically with regards to claim 30, Appellant's argue in section III, page 22, that: Fowler, Thurm, and Perholtz do not teach or suggest "the data read control signal is a 1-byte interrupt signal".

In response to appellant's remarks with regards to claim 30, examiner maintains the teachings of Fowler provide a means for the data read control signal to be a 1-byte interrupt signal, (Fowler, col. 27, lines 38-43) since Fowler discloses the data signals comprising byte lengths.

With regards to claims 7-21, 28, and 30-32,, more specifically with regards to claim 31, Appellant's argue in section II, page 21, that: the Fowler, Thurm, and Perholtz whether taken alone or in combination do not teach or suggest "the microcomputer recognizes that it is in a ready state to receive data when a fourth control signal assumes a first value and recognizes that it is in a state where data reading has been completed with the fourth control signal assumes a second value".

In response to appellant's remarks with regards to claim 31, examiner maintains Fowler implies the microcomputer recognizes that it is in a ready state to receive data when a fourth control signal assumes a first value and recognizes that it is in a state where data reading has been completed with the fourth control signal assumes a second value, (col. 27, lines 25-43), since Fowler discloses multiple data read signals input into the microcomputer.

With regards to claims 7-21, 28, and 30-32, more specifically with regards to claim 32, Appellant's argue in section III, page 23, that: Fowler, Thurm, and Perholtz do not teach or suggest "the first, second, third, and fourth control signals are received through different ports of the microcomputer".

In response to appellant's remarks with regards to claim 21, examiner maintains the teachings of Fowler provide a means for the first, second, third, and fourth control signals to be received through different ports of the microcomputer, (Fowler, col. 27, lines 25-43) since Fowler discloses receiving and transmitting data from the microcomputer. Furthermore, examiner maintains that although ports for the first, second, third, and fourth control signals are not expressly disclosed in the teachings of Fowler, such teachings provide no unexpected result when compared to the teachings of Fowler, and are thus obvious modifications to one of ordinary skill in the art.

With regards to claim 37, Appellant's argue in section IV, page 24, that: Emmott, Thurm and Fowler do not teach or suggest that "the microcomputer recognizes a data transmission zone of the signal converting unit if a high signal generated by the signal converting unit is applied to the microcomputer, while the microcomputer recognizes a data transmission zone of the microcomputer if a low signal is applied to the microcomputer."

In response to appellant's remarks with regards to claim 37, examiner submits it was acknowledged in the previous action by the examiner that Emmott and Thurm do not expressly disclose that "the microcomputer in the oven recognizes a data transmission zone of the signal converting unit if a high signal generated by the signal converting unit is applied to the microcomputer, while the microcomputer recognizes a data transmission zone of the microcomputer if a low signal is applied to the microcomputer." Nevertheless, examiner maintains such teachings were well known in

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the art, as disclosed by Fowler (col. 18, line 65-col. 19, line 12). Examiner has clearly provided reasons for combining the teachings of Fowler with Emmott and Thurm in the previous action. As per the previous action, examiner thus maintains Fowler teaches a microcomputer recognizing a data transmission zone of the signal converting unit if a high signal generated by the signal converting unit is applied to the microcomputer, while the microcomputer recognizes a data transmission zone of the microcomputer if a low signal is applied to the microcomputer, (col. 18, line 65-col. 19, line 12). Thus, if not implicit in the teachings of Emmott, it would have been obvious to one of ordinary skill in the art to combine the teachings of Emmott with Fowler to show a microcomputer recognizing a data transmission zone of the signal converting unit if a high signal generated by the signal converting unit is applied to the microcomputer, while the microcomputer recognizes a data transmission zone of the microcomputer if a low signal is applied to the microcomputer. This would have provided a simple, efficient, user-friendly means for performing cooking operations by downloading cooking information and using the downloaded information to cook food, (Fowler, col. 11, lines 3- 25).

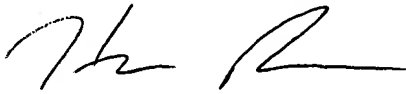
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(11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

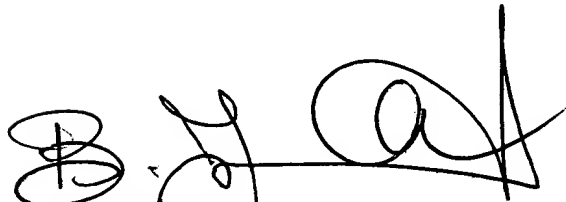
For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,




Hassan Phillips

Conferees:



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